

**SITUATION REPORT  
INCIDENT COMMAND POST GOLD KING  
GOLD KING MINE RELEASE INCIDENT  
U.S. ENVIRONMENTAL PROTECTION AGENCY**



Stabilization activities inside Gold King Mine adit (28 October 2015).

**Subject:** EXECSUM / SITREP #48  
Gold King Mine Release Incident  
San Juan County, Colorado  
Latitude: 37.8945 Longitude: -107.6384

**From:** Situation Unit, Incident Command Post Gold King

**Date:** 03 November 2015

**Reporting Period:** 0700 27 October 2015 through 0700 03 November 2015

**Website:** [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine)



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**EXECUTIVE SUMMARY**

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***Situation Summary***

EPA Region 8 is managing the Gold King Mine Release. Ongoing field activities include water treatment and winterization activities at the Gold King Mine/Gladstone site.

***Highlights, Key Updates/Changes***

- EPA Region 8 continues to work through action items identified as part of the transition of operations to EPA Region 8.
- As of 02 November 2015, EPA Region 8 completed mailing letters containing analytical results for private properties where U.S. EPA collected sediment and/or drinking water samples.

***Objectives***

- Ensure health and safety of the public and responders.
- Continue private water deliveries to homes with Primary MCL Exceedances.
- Continue to facilitate transition of cooperative agreements between San Juan Basin Health Department (SJBHD), Colorado Department of Public Health and Environment (CDPHE), and Colorado Office of Emergency Management (OEM) to EPA Region 8.
- Continue to work through action items identified as part of the transition of operations to EPA Region 8.
- Continue coordination with federal, state, tribal and local stakeholders.
- Prepare to conduct future sampling activities in accordance with the Long-term Monitoring Plan.
- Mine Operations
  - A pipeline is conveying water from Gold King Mine to the ponds en route to the Gladstone water treatment system.
  - Treatment system including the tiered solid dewatering pad (Geotube area) is operational. System is currently treating between 550 to 600 gallons per minute (gpm).
  - Construction of winterization building is approximately 50% complete.
  - Final grading is in progress around the Gladstone Ponds and access road, along with seed and matting application.
  - Red and Bonita Ponds reclamation is ongoing.
  - Once winterization of the system is complete in approximately mid-November 2015, mine operations will transition to a winter operations period. U.S. EPA will determine follow up actions to be conducted in the Spring over the winter during the system operation period.



### ***Command Emphasis***

For this operational period, the command emphasis is:

- Safety of responders and the public
- Visitors to the mine site are required to go through a safety briefing. See Mine Site Safety Plan.
- Personnel entering Southern Ute Tribal lands must be escorted by a Southern Ute staff member.
- Ensure information flow between ICP and Stakeholders is transparent.

The metrics provided in this Situation Report represent quantities reported for work completed from 0700 27 October 2015 through 0700 03 November 2015. Highlighted text and metrics represent changes from previous SITREP. Press releases are presented in Attachment 1.



## 1.0 BACKGROUND

The Gold King Mine (GKM) near Silverton, Colorado is an historic gold mine at an elevation of approximately 11,300 feet above mean sea level. The mine discharge includes acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The GKM workings have been inaccessible since 1995 when the mine portal collapsed.

On 5 August 2015, up to three million gallons (estimated) of water containing sediment and dissolved metals was suddenly released from the Gold King Mine adit. This water discharged into Cement Creek that feeds into the Animas River, and eventually flows into the San Juan River.

US EPA Region 8 continues to assess and mitigate effects from the release.

## 2.0 OPERATIONS

### 2.1 Mine Operations

#### 2.1.1 Current Mine Operations Summary

- A pipeline is conveying water from Gold King Mine to the Gladstone ponds en route to the water treatment system.
- Treatment system is operational (including the tiered solid dewatering pad) and is treating between 550 to 600 gallons per minute (gpm).
- Final grading is in progress around the ponds and access road, along with seed and matting application.
- Red and Bonita pond reclamation is ongoing.
- Winterization of the treatment system is currently in progress. Winterization will continue until approximately mid-November 2015. Construction of the winterization building is approximately 50% complete.
- Completed filling of the emergency pond at Gold King Mine.
- Water quality parameters are being collected at 03 locations daily, locations include:
  - Interim Gladstone Treatment System Discharge (GSTO)--150 ft upstream of Cement Creek (CC20).
  - Cement Creek (CC20) --250 ft upstream of the confluence with South Fork, 150 ft downstream of GSTO
  - Cement Creek (CC18)—1,000 ft upstream from the confluence with North Fork Cement Creek
- START personnel are conducting periodic pH readings to monitor treatment influent above Gladstone ponds (GSTI).



Gladstone treatment system in operation.



### 2.1.2 Mine Operations- Planned Activities

A partial list of additional planned activities at the GKM site include:

- GKM Portal
  - Additional Grading Activities
  - Security Gate Installation
  - Additional culvert work on Cement Creek at first switchback below GKM portal
- Additional Road Grading throughout operations areas
- North Fork Cement Creek- additional minor stream bank cleanup
- Additional Reclamation activities (seed, compost, etc.) in area south of Red and Bonita settling ponds
- Upper Gladstone Area
  - Additional drainage and reclamation activities
  - Installation of additional fencing and signage at Gladstone Ponds
- General grading on county roads from Gladstone to Red & Bonita area

### 2.2 River Sampling

U.S. EPA will conduct future sampling activities according to the Long-Term Monitoring Plan. The table below summarizes operational activities for surface water and sediment sampling. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples.

Table 1 - Operations Sampling Summary									
Matrix	U.S. EPA Region	Quantity							
		Oct. 2015					Nov. 2015		Cumulative
		27	28	29	30	31	1	2	
Surface Water Samples	8	0	0	0	3	0	0	0	702
	6	0	0	0	0	0	0	0	561
	9	0	0	0	0	0	0	0	310
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,573</b>
Sediment Samples	8	0	0	0	0	0	0	0	349
	6	0	0	0	0	0	0	0	553
	9	0	0	0	0	0	0	0	256
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,158</b>

### 2.3 Private Well Sampling

U.S. EPA has collected and analyzed samples from drinking water wells located near the Animas River and San Juan River. There has been no sampling of private drinking water wells in U.S. EPA Region 9.

Private well samples that have metals concentrations greater than the Maximum Contaminant Levels (MCLs) and were collected from private drinking water wells during the first sampling event were sampled a second time to confirm the analytical results. In Region 8, the second round of samples at a given property were collected from the tap. U.S. EPA as notified residents that have MCL exceedances.

The table below provides a summary of private drinking water well sampling completed during this operational period.



Table 2 – Private Drinking Water Well Sampling Summary									
Matrix	U.S. EPA Region	Quantity							
		Oct. 2015					Nov. 2015		Cumulative
		27	28	29	30	31	01	02	
Private Drinking Water Well Samples Collected (from SCRIBE, includes QA/QC samples)	8	0	0	0	0	0	0	0	449
	6	0	0	0	0	0	0	0	309

Notes: Some residents received multiple results letters  
Some residential sampling included surface water and/or sediment sampling.

Table 3 - Summary of Wells with MCL Exceedances		
Matrix	U.S. EPA Region	Cumulative
Wells containing contaminant concentrations above MCLs during second sampling event	8	4
	6	1*

\*Note: One well in Region 6 exceeded the MCL for lead and after further assessment by the State of New Mexico and the U.S. EPA, it was determined that the exceedance was not related to the GKM incident.

## 2.4 Mitigation Activities

No public water systems are currently affected by the release or response operations. ICPGK continues to coordinate and deliver bottled drinking water to **four** residences in Region 8. The table below summarizes other public support activities completed.

Table 4 - Completed Public Support (Cumulative)				
Activity	U.S. EPA Region	Qty. (gal)	Qty. (hay bales)	Qty. (salt blocks)
Potable Water Deliveries	8	105,600		
Livestock / Agricultural Water Deliveries	8	133,770		
	6	1,104,990		
	9	218,400		
	BIA	975,888		
Agricultural Food Deliveries	6		244	
	9		8,448	
Agricultural Salt Block Deliveries	8			500

### 2.4.1 Water Tanks

On or about 15 August 2015, 15 black steel tanks (16,500 gallon capacity each) were delivered by the ERRS contractor to certain locations on the Navajo Reservation as part of the response to the Gold King Mine release incident. U.S. EPA has removed all 15 of the water tanks from the Navajo Reservation.

### 2.4.2 Other Mitigation Activities

No other activities reported.



### 3.0 PLANNING

#### 3.1 Environmental Unit

As of 02 November 2015, EPA Region 8 completed mailing letters containing analytical results for private properties where U.S. EPA collected sediment and/or drinking water samples.

#### 3.2 Resources

The table below summarizes staffing numbers for the federal entities and agencies active at the Gold King Mine Site.

Table 5 - Personnel On-Site (as of 30 October 2015)		
Location	Agency / Entity	Number of Personnel
Mine Operations	U.S. EPA	2
	USCG	3
	U.S. EPA Contractors (START)	2
	U.S. EPA Contractors (Other-Daily average)	30
	Visitors	7
Total		44

USCG = U.S. Coast Guard.

### 4.0 FINANCE

#### 4.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response as of 3 November 2015.

Table 6 - Estimated Response Costs Reported as of 3 November 2015					
U.S. EPA Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	U.S. EPA Cumulative Contractors Cost	Total Cumulative Costs
8	\$1,272,198	\$294,369	\$46,109	\$8,064,115	\$9,676,791
6	\$649,858	\$120,141	\$12,989	\$2,832,514	\$3,615,502
9	\$294,057	\$81,894	\$0	\$2,543,671	\$2,919,622
Total	\$2,216,113	\$496,404	\$59,098	\$13,440,300	\$16,211,915

#### 4.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.

Table 7 - Estimated Daily Burn Rates as of 3 November 2015	
U.S. EPA Region	Estimated Average Daily Burn Rate
8	\$35,000
6	\$-
9	\$8,920
Total	\$43,920

### 5.0 LOGISTICS

Logistics completed demobilization of the ICPGK facility in Durango, Colorado on Friday, 23 October 2015.



## 6.0 SAFETY

Safety did not report any recordable injuries or illnesses during this operational period.

## 7.0 PUBLIC INFORMATION

### 7.1 Community Engagements and Public Events

Community engagements and public events that occurred during this period included:

- Animas River Stakeholders Meeting- 27 October 2015

### 7.2 VIPs/Congressional Visits

#### 7.2.1 Occurred Events

VIP / Congressional visits that occurred during this period include:

- None.

#### 7.2.2 Anticipated Events

The table below summarizes known site visits and public events scheduled for the next 14 days.

Table 8 - Anticipated Site Visits and Public Events Summary	
Planned Event	Anticipated Date
No Events Scheduled	N/A

### 7.3 Call Center / Notification Plan

U.S. EPA Headquarters continues to operate a national call center (844-607-9700).

Personnel at the EPA Region 8 call-in number are now managing the Gold King Mine Stakeholder Alert and Notification Plan.

## 8.0 LIAISON

The list below summarizes Federal, regional, local and other entities participating in the response.

U.S. EPA  
U.S. Coast Guard (USCG)  
U.S. Geological Survey (USGS)  
U.S. Army Corps of Engineers (USACE)  
U.S. Bureau of Reclamation (USBOR)  
U.S. Fish and Wildlife Services (USFWS)  
Colorado Office of Emergency Management (OEM)  
Colorado Department of Public Health and Environment (CDPHE)  
New Mexico Environment Department (NMED)  
New Mexico (NM) Department of Health  
NM Office of the State Engineer  
NM Department of Game and Fish  
State of Utah  
State of Arizona  
City of Durango





La Plata County  
San Juan County  
San Juan Basin Health Department  
County of San Juan – New Mexico  
Southern Ute Indian Tribe (SUIT)  
Navajo Nation

#### **9.0 SOURCE OF ADDITIONAL INFORMATION**

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For additional information, refer to [www.epa.gov/goldkingmine](http://www.epa.gov/goldkingmine).



**ATTACHMENT 1**  
**PRESS RELEASES**



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PRESS RELEASE #1

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## Gold King Mine Data, October 28, 2015

[Free viewers may be needed to access information linked on this page.](#)

[Data from Gold King Mine Response](#)

Surface water and sediment concentrations are now below recreational screening levels. The river system as a whole is being maintained at pre-event conditions.

It is important to keep in mind that metal concentrations in water and sediment may fluctuate. Fluctuations occur because of weather and other events that change water flow rates or volume. They can also occur if sediments are accumulating at a higher than normal rate at a particular site, before being washed away by the next high water event.

As the response to the mine release transitions to long-term evaluations, EPA will continue to monitor for any abnormal occurrences of metal concentration exceedances of risk-based screening levels.

This data submission presents data for sediment samples collected on 9/30 from the San Juan River.

EPA has reviewed the data that includes comparison to screening levels for exposure during recreational use. The metal concentrations of the samples are below sediment/soil recreational screening levels, and are being maintained at pre-event conditions. Based on previous monitoring events it has been shown that metal concentrations may fluctuate from time to time because of water surges due to heavy rains or other events that may change the water flow rates or volume.

- Open or download the data file: [Region 9 Sediment Summary Table 10032015 \(XLSX\)](#)(1 pg, 24 K)

This data submission presents data for surface water samples collected on 9/28 and 9/30 from the San Juan River.

EPA has reviewed the data that includes comparison to screening levels for exposure during recreational use. The metal concentrations of the samples are below surface water recreational screening levels. Surface water sample results from a September 24 sampling event along the San Juan river exhibited an increase in metal concentrations relative to pre-event conditions, with some metal concentrations above the recreational screening values, presumably due to a rain event. The September 28 surface water results indicate the metal concentrations to be below the recreational screening values, but still somewhat elevated relative to pre-event conditions. The September 30 surface water results indicate the metal concentrations have returned to pre-event conditions.

- Open or download the data file: [Region 9 Surface Water Summary Table 10032015 \(XLSX\)](#)(1 pg, 65 K)